

The electrocuted child

General features:

- AC is lethal at lower voltages than DC
- Effects of an increase in current:
 - 10mA = tetanic contraction, cant let go of electrical source
 - 50mA = respiratory arrest due to diaphragmatic tetany
 - 100mA to 50A = primary cardiac arrest (a defib is 10A)
 - 50A and above = severe burns + cardiorespiratory arrest

Relative resistance of body tissues, from least to most:

- Tissue fluid
- Blood
- Muscle
- Nerve
- Fat
- Skin
- Bone
- Nerves, blood vessels, skin and muscle are injured most
- Bone can continue to increase in temperature after the current has stopped
- Swelling of damaged structures can cause compartment syndrome

Primary and secondary survey

- The key is to find the entry and exit point- that way you know what organs got in the way of the current
- There will be burns
- There may also be fractures from tetanic contraction
- There will be rhabdomyolysis in the injured muscle: **you may want to alkalinize the urine, and maintain an output of ~ 2ml/kg/**
- There will be cardiac arrhythmias, and they will need to be monitored.